

REMARKS

Initially, Applicants would like to express their appreciation to the Examiner for the detailed Official Action provided, for the acknowledgment of Applicants' Claim for Priority and receipt of the certified copy of the priority document in the Official Action, and for the acknowledgment of Applicants' Information Disclosure Statement by return of the Form PTO-1449.

Upon entry of the above amendments, the Title and the Specification will have been amended. Claims 1-4 are currently pending. Applicants respectfully request reconsideration of the outstanding objections and rejections, and allowance of all the claims pending in the present application.

On page 2 of the Official Action, the specification was objected to as having a non-descriptive title. Applicants note that a replacement Title which is more descriptive has been provided. Accordingly, Applicants respectfully request withdrawal of the objection to the specification.

On page 2 of the Official Action, the drawings were objected to as containing reference numbers (231, 232, 331, 332, 431 and 432) which are not described in the specification. Applicants note that the specification has been amended to include the reference numbers noted by the Examiner. Accordingly, Applicants respectfully request withdrawal of the objection to the drawings.

On pages 2 and 3 of the Official Action, claims 1-4 were rejected under 35 U.S.C. § 112, 1st paragraph. The Examiner appears to take the position that the “diffraction lens structure” recited in the claims is not enabled by the disclosure of the present application.

Applicants respectfully traverse the rejection under 35 U.S.C. § 112, 1st paragraph.

Applicants submit that the disclosure of the present application clearly enables the subject matter of the present claims, including the recited “diffraction lens structure”. In this regard, Applicants note that enablement is necessarily evaluated in the context of the knowledge of those of ordinary skill in the art. Applicants submit that those of ordinary skill in the art of lens design are clearly aware of techniques for forming diffraction structures, and in particular diffraction structures on lenses. Applicants note that several references of record, including U.S. Patent Nos. 5,838,480; 6,115,164; and 6,124,962 demonstrate that diffraction lens structures are known in the art. Further, the Examiner appears to acknowledge as much in his discussion of the KAMIKUBO patent (U.S. Patent No. 6,124,962). Accordingly, Applicants submit that the Examiner can not reasonably take the position that the formation of “diffraction lens structures” is not enabled by the disclosure of the present application viewed in the context of the knowledge of those of ordinary skill in the art.

Further, insofar as the Examiner also appears to question how the “diffraction lens structure” disclosed in the present application can compensate for lateral chromatic

aberration, Applicants submit that such is clearly enabled by the disclosure of the present application viewed in the context of the knowledge of those of ordinary skill in the art.

For example, at least the KAMIKUBO patent (U.S. Patent No. 6,124,962) demonstrates that those of ordinary skill in the art are aware that diffraction lens structures may be designed to compensate for lateral chromatic aberration. Further, the Examiner appears to acknowledge as much based upon his statements made in the rejection under 35 U.S.C.

§ 103(a): “Kamikubo further discloses a diffraction lens structure 15a that compensates for a lateral chromatic aberration in the main scanning direction (col. 4, lines 35-36).”

Accordingly, Applicants submit that the Examiner can not reasonably take the position that designing “diffraction lens structures” to compensate for lateral chromatic aberration is not enabled by the disclosure of the present application viewed in the context of the knowledge of those of ordinary skill in the art.

Finally, Applicants submit that the present application clearly provides enabling support for the “diffraction lens structure” recited in the claims, at least at page 3, line 23 through page 4, line 8; page 9, lines 3-18; page 11, lines 10-18; page 12, line 9 through page 15, line 17; page 18, lines 2-11; page 19, lines 1-17; page 21, line 6 through page 22, line 7; and page 23, line 10 through page 11, line 24. In this regard, Applicants note that a manner in which diffraction lens structures can be expressed is discussed on pages 13-15 of the present application, and that three specific examples of the “diffraction lens

structure" are described on pages 15-26 of the present application.

Applicants respectfully submit that the rejection of claims 1-4 under 35 U.S.C. § 112, 1st paragraph, is improper at least for each and certainly for all of the above-noted reasons. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection, and an early indication of the allowance of these claims.

On pages 3 and 4 of the Official Action, claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over KAMIKUBO (U.S. Patent No. 6,124,962) in view of IIZUKA (U.S. Patent No. 6,028,688). (Applicants note that U.S. Patent No. 6,124,962 does not include any of the alleged teachings at the locations indicated by the Examiner. It appears that the Examiner may instead be referring to parts of U.S. Patent No. 6,115,164.)

Applicants respectfully traverse the rejection of claims 3 and 4 under 35 U.S.C. § 103(a).

As an initial matter, Applicants note that neither of the patents to KAMIKUBO (U.S. Patent No. 6,124,962 and U.S. Patent No. 6,115,164), which issued after the filing date of the present application, are available as prior art under 35 § 103(c) due to common ownership of the subject matter of the present application at the time the invention was made. Accordingly, Applicants submit that the rejection under 35 U.S.C. § 103(a) should be withdrawn for at least this reason. Although withdrawal of the rejection is

proper for at least this reason, Applicants will also address the teachings of the applied references.

KAMIKUBO appears to disclose an fθ lens 20 which includes plural lens elements 21, 22, 23 with a diffraction structure formed on one surface 21a. However, Applicants submit that KAMIKUBO lacks (at least) any teaching of an fθ lens including a glass lens and a plastic lens as claimed, or any teaching of such an fθ lens which satisfies the conditions recited in the claims.

Applicants submit that one of ordinary skill in the art would not have been motivated to modify the system of KAMIKUBO as suggested by the Examiner based upon the teachings of IIZUKA. Applicants submit that the modification suggested by the Examiner is the result of impermissible hindsight reasoning based upon the disclosure of the present application, rather than the teachings of the applied prior art. Accordingly, Applicants submit that it would not have been obvious to one of ordinary skill in the art to provide a glass lens and a plastic lens in the system of KAMIKUBO.

Further still, Applicants note that Examiner has provided no teaching of an fθ lens which is designed to satisfy conditions recited in the claims, much less an fθ lens having a glass lens, a plastic lens, and a diffraction lens structure, which is designed to satisfy such conditions. Applicants submit that the modification suggested by the Examiner is the result of impermissible hindsight reasoning based upon the disclosure of the present

application, rather than the teachings of the applied prior art. Accordingly, Applicants submit that it would not have been obvious to one of ordinary skill in the art to provide an fθ lens which is designed to satisfy the recited conditions in the system of KAMIKUBO.

Applicants respectfully submit that the rejection of claims 3 and 4 under 35 U.S.C. § 103(a) is improper at least for each and certainly for all of the above-noted reasons. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection, and an early indication of the allowance of these claims.

On pages 4-7 of the Official Action, claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as being unpatentable over KOIDE (U.S. Patent No. 5,181,137) in view of KAMIKUBO (U.S. Patent No. 6,124,962) and IIZUKA (U.S. Patent No. 6,028,688). (Applicants again note that U.S. Patent No. 6,124,962 does not include any of the alleged teachings at the locations indicated by the Examiner. It appears that the Examiner may instead be referring to parts of U.S. Patent No. 6,115,164.)

Applicants respectfully traverse the rejection of claims 1 and 2 under 35 U.S.C. § 103(a).

As an initial matter, Applicants again note that neither of the patents to KAMIKUBO (U.S. Patent No. 6,124,962 and U.S. Patent No. 6,115,164), which issued after the filing date of the present application, are available as prior art under 35 § 103(c) due to common ownership of the subject matter of the present application at the time the

invention was made. Accordingly, Applicants submit that the rejection under 35 U.S.C. § 103(a) should be withdrawn for at least this reason. Although withdrawal of the rejection is proper for at least this reason, Applicants will also address the teachings of the applied references.

Applicants note that KOIDE appears to disclose an fθ lens 3 with lens elements 3a and 3b. Applicants submit that KOIDE lacks (at least) any teaching of an fθ lens which includes a diffraction lens structure as claimed, an fθ lens including a glass lens and a plastic lens as claimed, or any teaching of such an fθ lens which satisfies the conditions recited in the claims.

Applicants submit that one of ordinary skill in the art would not have been motivated to modify the system of KOIDE as suggested by the Examiner based upon the teachings of KAMIKUBO. Applicants submit that the modification suggested by the Examiner is the result of impermissible hindsight reasoning based upon the disclosure of the present application, rather than the teachings of the applied prior art. Accordingly, Applicants submit that it would not have been obvious to one of ordinary skill in the art to provide an fθ lens which includes a diffraction lens structure in the system of KOIDE.

Applicants submit that one of ordinary skill in the art would not have been motivated to modify the system of KOIDE as suggested by the Examiner based upon the teachings of IIZUKA. Applicants submit that the modification suggested by the

Examiner is the result of impermissible hindsight reasoning based upon the disclosure of the present application, rather than the teachings of the applied prior art. Further, Applicants submit that such a further modification of the $f\theta$ lens would constitute an impermissible modification of a modification. Accordingly, Applicants submit that it would not have been obvious to one of ordinary skill in the art to provide a glass lens and a plastic lens in the system of KOIDE.

Further still, Applicants note that Examiner has provided no teaching of an $f\theta$ lens which is designed to satisfy conditions recited in the claims, much less an $f\theta$ lens having a glass lens, a plastic lens, and a diffraction lens structure, which is designed to satisfy such conditions. Applicants submit that the modification suggested by the Examiner is the result of impermissible hindsight reasoning based upon the disclosure of the present application, rather than the teachings of the applied prior art. Accordingly, Applicants submit that it would not have been obvious to one of ordinary skill in the art to provide an $f\theta$ lens which is designed to satisfy the recited conditions in the system of KOIDE.

Applicants respectfully submit that the rejection of claims 1 and 2 under 35 U.S.C. § 103(a) is improper at least for each and certainly for all of the above-noted reasons. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection, and an early indication of the allowance of these claims.

SUMMARY AND CONCLUSION

Entry and consideration of the present amendment, reconsideration of the outstanding Official Action, and allowance of the present application and all of the claims therein are respectfully requested and now believed to be appropriate.

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so.

Any amendments that have been made, which do not narrow the scope of the claims, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered cosmetic in nature, and to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should there be any questions or comments, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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September 12, 2004
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